						SP211 Course Outline	***M, W, F Sections***		***Fall 2000***
								Representative	
	DATE		TEXT		CD ROM	TOPIC	LAB (Lab Manual)	Questions*	Problems*
			CH	SEC					
1	Aug	21				admin., diagnostic exams, etc.	Week 1: TBA		
2		23	1	1-8	1.1-1.8	dimensional analysis, unit conversion, coord. sys.		4, 6	2, 7, 13, 23, 34
3		25		9-11	2.1-2.5	vectors, scalars, vector properties, components		9, 11, 13, 14	25, 30, 37, 38
4		28	2	1-4	3.1-3.3	velocity, acceleration, and motion diagrams	Week 2:	2, 5, 12	4, 5, 7, 12
5		30		5-6	3.4	1D motion with constant acceleration	1D Kinematics	10, 13	19, 27, 30a&b, 36
6	Sep	1	3	1		displacement, velocity, and acceleration vectors	via graphs	2	2, 3, 39
		4				*Labor Day*			
7		6		2-3	3.5	2D motion with constant acceleration	Week 3: TBA	5, 10	9, 10, 17
8		8		4-5	3.6	circular motion		3, 6	24, 28, 33
9		11	4	1-4	4.1-4.4	N1L and N2L	Week 4:	1	3, 13,17
10		13		5-6	4.5	weight, N3L	2D Kinematics	3, 4, 6, 7	19
11		15		7	4.6	applications of Newton's laws			21b, 23, 24, 28
12		18		7		applications of Newton's laws (continued)	Week 5: Newton's		30, 31, 33, 45
13		20	5	1		static and kinetic friction	First & Second Laws	1, 2	1, 4, 8, 9
14		22		demo		in Michelson Room 117			
15		25		2-3	4.7	N2L applied to circular motion	Week 6:	7, 9	13, 17, 23, 40, 47
16		27		4,6-7	4.9	drag forces, fundamental forces, grav. field	Centripetal Force	12	27, 29
17		29				Time reserved for exam. Actual date TBA			35, 51
18	Oct	2	6	1-3	2.6,5.1-5.3	work, the scalar product	Week 7:	2	4, 9, 13, 19
		3				*Six-week Grades Due*	Work and Energy		
19		4		4	5.7	the work-kinetic energy theorem		10	23, 25, 28
20		6		5	5.8	power			36
		9				*Columbus Day*	Week 8: TBA		
21		11	7	1-3	5.5,5.6	conservative forces and potential energy			1, 2, 3, 4, 8, 9
22		13		4-7	5.9	conservation of mechanical energy	Week 9:		12, 21, 26, 30, 32
23		16	8	1-2	6.1-6.3	linear momentum	1D Collisions	1, 2	6, 7, 8
24		18		3	6.4,6.5	impulse and collisions			9, 11
25		20		4-5	6.6,6.7	elastic and inelastic collisions	Week 10:		13, 15, 23, 27
26		23		6-7	6.7,6.8	center of mass and motion of system of particles	2D Collisions and		33, 35, 39, 40
27		25	10	1-3	7.1,7.2	rotational kinematics	Center of Mass	3	3, 7, 11, 13
28		27		demo		in Michelson Room 117			
29		30		4-7	7.3-7.5	rotational K.E., torque and angular acceleration	Week 11:	4, 10, 14	14, 17, 25, 27
30	Nov	1		8-9,11	7.8,7.9	angular momentum, rotation of rigid bodies	Rotational	15	29, 31,40, 42
31		3		11	7.7	rotation of rigid bodies (continued)	Kinematics and		43, 45, 46, 47
32		6				Time reserved for exam. Actual date TBA	Dynamics		
		7				*Twelve-week Grades Due*			
33		8	11	1-2		Newton's law of gravity, Kepler's laws	Week 12: TBA	1	1, 4, 8
		10				*Veteran's Day*			
34		13		3-4		motions of planets and energy considerations	Week 13:	4, 6, 7	6, 10, 13, 15
35		15	12	1-2	8.1-8.3	simple harmonic motion, mass on spring	Simple Harmonic	3	1, 3, 12, 15
36		17		3-6	8.11,8.12	energy, pendulum, damping & resonance	Motion	7	21, 26, 27, 30
37		20	13	1-4	8.4-8.9	wave characteristics, sinusoidal traveling waves		6, 9	1, 2, 4, 8, 9
38		22		5-7	9.1-9.3	superposition, interference, reflection, & energy	Week 14: TBA	3	13, 14, 19, 22
						Thanksgiving			
39		27		9-10	9.6,9.7	sound waves, Doppler effect	Week 15:		29, 31, 33
40		29	14	1-5	9.8-9.12	standing waves, beats	Standing Waves	5, 9, 13	2,5,16,19,24,31,33
41	Dec	1		demo		in Michelson Room 117	on a String		
		2				Army/Navy Game			
42		4	15	1-4		fluid statics	Week 16: TBA	1, 4, 18	1, 6, 15, 19
43		6		5-8		fluid dynamics (Weds., 6 Dec., is a Friday class.)	(Tues., 5 Dec., is a Thursday class.)		21, 24, 31, 40
						Review and Final Exams			

*A link to the solutions can be found on the SP21x Support Page which can be accessed from the Physics Department Home Page.